Comparing Speedometer 2.0 benchmark results for Chromebooks from Dell, Lenovo, and HP

At Principled Technologies, we used the web-based Speedometer 2.0 benchmark to test a total of seven Chromebooks™ from Dell, Lenovo, and HP. According to the official website, Speedometer 2.0 simulates user actions in the context of web browsing, and records how quickly the system responds to those actions. Higher scores in this benchmark suggest a more responsive device, so comparing Speedometer 2.0 scores across configurations can be useful for assessing device performance—especially as web browsing is such an important use case for Chromebook users.

Below are the results of our testing. With 43.65 points, the Dell Chromebook 3100 with an Intel® Celeron® N4000 processor earned the highest Speedometer 2.0 score. For more information on the devices we tested, see this report's appendix.

Our test results

Rank	Chromebook	Processor	Score
1	Dell Chromebook 3100	Intel Celeron N4000	43.65
2	Lenovo 500e Chromebook	Intel Celeron N4100	42.30
3	HP 11 Chromebook 11 G6 EE	AMD A4-9120C	28.00
4	Lenovo 100e Chromebook	MediaTek™ 8173c	26.00
5	Dell Chromebook 5190	Intel Celeron 3350	25.20
6	Dell Chromebook 5190 2-in-1	Intel Celeron 3450	25.10
7	Dell Chromebook 3189	Intel Celeron N3060	18.21

On May 6, 2019, we finalized the hardware and software configurations we tested. Updates for current and recently released hardware and software appear often, so unavoidably these configurations may not represent the latest versions available when this report appears. For older systems, we chose configurations representative of typical purchases of those systems. We concluded hands-on testing on May 6, 2019.

APPENDIX A: SYSTEM CONFIGURATION INFORMATION

System	Dell Chromebook 3100	Dell Chromebook 3189	Dell Chromebook 5190
Processor	Intel Celeron N4000	Intel Celeron N3060	Intel Celeron N3350
Processor frequency (GHz)	1.10 - 2.60	1.60 – 2.48	1.10 – 2.40
Processor cores	2	2	2
Memory (GB)	4	4	4
Storage (GB)	16	16	32
Wireless	802.11 ac	802.11 b/g/n	802.11 ac
Bluetooth	5.0	4.0	4.0
USB	1x USB 3.1 Type C, 1x USB 3.1	2x USB 3.1	2x USB 3.1 Type C, 2x USB 3.1
Battery type	Lithium-ion	Lithium-ion	Lithium-ion
Battery capacity (Wh)	42	42	42
Display	11.6" 1366x768	11.6" 1366x768	11.6" 1366x768
OS (version)	73.0.3683.114	73.0.3683.88	73.0.3683.114
Build/firmware	Fleex.11297.29.0	Kefka.7287.379.0	Coral.10068.76.0
System weight (lbs.)	2.85	3.22	2.82

System	Dell Chromebook 5190 2-in-1	Lenovo 100e Chromebook (2nd Gen)	Lenovo 500e Chromebook (2nd Gen)
Processor	Intel Celeron N3450	MediaTek 8173C	Intel Celeron N4100
Processor frequency (GHz)	1.10 – 2.20	2.10	1.10 – 2.40
Processor cores	4	4	4
Memory (GB)	4	4	4
Storage (GB)	32	32	32
Wireless	802.11ac	802.11ac	802.11ac
Bluetooth	4.0	4.1	4.2
USB	2x USB 3.1 Type C, 2x USB 3.1	1x USB 3.1 Type C, 1x USB 3.0	2x USB 3.1 Type C, 2x USB 3.0
Battery type	Lithium-ion	Lithium-ion	Lithium-ion
Battery capacity (Wh)	42	42	42
Display	11.6" 1366x768	11.6" 1366x768	11.6" 1366x768
OS (version)	73.0.3683.114	73.0.3683.114	73.0.3683.114
Build/firmware	Coral.10068.76.0	Hana.8438.170.0	Phaser.11297.29.0
System weight (lbs.)	3.09	2.68	2.9

System	HP Chromebook 11A G6 EE
Processor	AMD A4-9120C
Processor frequency (GHz)	1.60 – 2.40
Processor cores	2
Memory (GB)	4
Storage (GB)	16
Wireless	802.11 ac
Bluetooth	4.2
USB	2x USB 3.1 Type C, 2x USB 3.1
Battery type	Lithium-ion
Battery capacity (Wh)	47.36
Display	11.6" 1366x768
OS (version)	73.0.3683.114
Build/firmware	Grunt.11031.44.0
System weight (lbs.)	2.78

APPENDIX B: HOW WE TESTED

Performing the Speedometer 2.0 test

1. Open a web browser for the system under test, and navigate to https://browserbench.org/Speedometer2.0/.
2. Click Start Test.
3. When the test completes, record the results.
4. Click Test Again.
5. Repeat steps 3 and 4 for a total of three runs. We reported the median of three runs.

ABOUT PRINCIPLED TECHNOLOGIES

Principled Technologies®

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